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THE AGRICULTURAL SITUATION

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A Brief Summary of Economic Conditions

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EXPANSION of the Ever-Normal Granary Program into a Food Program designed to assure ample supplies for national defense and export under provisions of the Lease-Lend Act has been announced by the Department of Agriculture. Abundant supplies of feed grains are available for this purpose, and new crops will soon be coming on. * * * Farmers are being urged to feed hogs to heavier weights and to increase breeding for fall litters . . . to increase milk production (for heavier manufacture of concentrated dairy products) through supplemental feeding during the pasture season . . . to expand poultry laying flocks and to feed for maximum egg production . . . to increase the marketings of cattle for slaughter . . . to increase the production of cannery tomatoes. * * * The production season is off to a good start on food and feed crops, prices of farm products average the highest since 1937, farm cash income will be larger this year than last. New cotton and tobacco crops are being planted . . . harvesting of winter wheat will soon be under way. Costs of production will be larger this year than last. Farm wages are the highest in a decade.

Commodity Reviews

DEMAND: Favorable

DEVELOPMENTS during the past month were favorable to a considerable increase in exports of some agricultural products over the small volume of recent months. At the same time, the improvement in conditions affecting the domestic demand for farm products promises to continue after the temporary slight set-back due to labor difficulties.

Exports of farm products apparently were smaller in recent months than at any time since shortly after the Civil War, and even a considerable improvement would still leave the general export demand picture very unfavorable. Nevertheless, Government purchases for export to Great Britain under the Lease-Lend Act will be a definite factor in the market for some commodities. One billion three hundred and fifty million dollars has been appropriated for agricultural and industrial commodities under this legislation, but no definite portion of this fund has been earmarked for agricultural products. The British food needs include canned meats, canned pork and lard, dried and evaporated milk, cheese, eggs, dried beans, dried fruits, citrus fruit and tomato juices and starches. Canada will be able to supply British needs for wheat for a long time to come, and severe curtailment of British textile operations together with shortage of shipping space is not favorable to a material increase in cotton exports.

The purchasing power of factory wages is at record levels, contributing to increased consumer demand for farm products over the corresponding months of 1940. The money incomes of industrial workers recently have increased much more than the cost of living, although recent rises in wholesale prices of some commodities point to the probability of gradually rising

living costs in the remainder of the year. But with increased industrial activity and incomes, consumers will continue to have large purchasing power available for buying farm products.

F. L. THOMSEN.

PRODUCTION: Prospects

The 1941 farm production season got off to a good start under generally favorable planting conditions and the stimulus of better prices this year than last for most of the products dependent primarily on domestic consumer demand. Farm pastures were in better-than-average condition; the western ranges were in best condition since 1931. There was in general an ample carry-over of old feed, and new grass had started well in the early range areas.

Stocks of grain on farms were large in early April. Farm stocks of corn were smaller than at that time a year earlier, but stocks of oats were larger because of the unusually large production in 1940. Including barley and grain sorghums, farm stocks of all feed grain combined were about the same as a year earlier. Wheat stocks on farms were estimated at nearly 196 million bushels, or about 50 percent more than the 10-year average on April 1.

The Crop Reporting Board pointed out that fruit prospects were still quite uncertain, but that conditions were believed to be favorable in most areas. . . . Reports on plantings of early vegetables in the South and on intended plantings of early planted vegetables in the North showed various shifts as between regions and between crops, but no "very significant changes in the aggregate acreage of vegetables to be grown for fresh market."

PRICES: Higher

Index of prices of farm products in April was 110. This was the highest average of prices received by farmers in 4 years. But prices farmers pay for commodities and services used in production average much higher than this figure, and the purchasing power of farm products is 11 percent below the pre-World War base period.

The advance in prices received during April was due largely to higher

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	123	84
April.....	110	124	89

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average August 1909-July 1914	April average, 1910-14	April 1940	March 1941	April 1941	Parity price April 1941
Cotton, lb.....	12.4	12.4	10.0	9.72	10.4	16.0
Corn, bu.....	64.2	63.4	58.6	57.1	62.0	82.8
Wheat, bu.....	88.4	89.3	88.9	71.8	76.0	114.0
Hay, ton.....	11.87	12.16	8.29	7.93	8.10	15.31
Potatoes, bu ¹	69.7	68.8	83.8	53.8	57.6	88.8
Oats, bu.....	39.9	40.9	38.8	33.7	35.2	51.5
Rice, bu.....	81.3		63.2	97.1	111.7	104.9
Apples, bu.....	.96	1.18	.90	.97	1.06	1.24
Beef cattle, cwt.....	5.21	5.50	7.32	8.28	8.60	6.72
Hogs, cwt.....	7.22	7.59	4.90	7.08	8.01	9.31
Chickens, lb.....	11.4	11.8	12.9	14.4	15.7	14.7
Eggs, doz.....	21.5	16.6	15.0	16.4	19.7	² 21.7
Butterfat, lb.....	26.3	25.9	27.5	30.7	32.6	² 34.0
Wool, lb.....	18.3	18.0	26.1	33.4	34.7	23.6
Veal calves, cwt.....	6.75	6.76	8.63	9.74	9.84	8.71
Lambs, cwt.....	5.87	6.46	8.14	8.92	9.09	7.57
Horses, each.....	136.60	140.40	76.60	69.60	69.80	176.20

¹ Post-war base.

² Adjusted for seasonality.

prices of livestock, dairy products, poultry, and eggs. Stimulating factors included the Government commitment to support prices of hogs, dairy products, and poultry products at levels remunerative to producers during the next 2 years under the expansion program designed to increase the production of specified foods for national defense and export under provisions of the Lease-Lend Act.

FARM WAGES: Up

Farmers this spring have been paying highest wages in 10 years. Reason is that the demand for labor is greater than the supply, as increasing numbers of workers have been drawn into industrial plants and military training. As a national average, the supply of farm labor was 82 percent of the demand on April 1 as contrasted with 109 percent a year earlier. This was the smallest supply-demand ratio in 21 years of Government record.

Ratio of farm labor supply to demand was below 75 percent in a large part of the northeastern industrial area and in southeastern areas of accelerated industrial production for national defense. AMS reported that in only a few scattered sections west of the

Mississippi the supply of farm labor was equal to or greater than the demand.

During June and July in recent years approximately 3 million hired hands have been employed to supplement the work of farm families. Reports as of April 1 this year showed more than 2 million hired workers on farms. An additional hired labor force of approximately 1 million workers will be required during the next 2 months.

INCOME: Increase

Cash farm income during the second quarter of 1941 should be substantially larger than in the like period of 1940. Consumer buying power is considerably higher this year than last, and the Government has made commitments to support prices of hogs, dairy products, poultry, and eggs, in conjunction with increased production of these commodities.

Income from marketings of livestock and livestock products was larger in the first quarter of this year compared with last—1,221 million dollars as compared with 1,039 million. Largest gains were in income from meat animals. From marketings of crops the total was 613 million dollars in the first quarter of this year, compared with 660 million in the like period of 1940. Crops yielding smaller income during this period included grains, vegetables, and tobacco. Government payments totaled 240 million dollars as compared with 291 million in 1940.

Month and year	Income from marketings	Income from Government payments	Total
March:	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
1941.....	617	71	688
1940.....	537	67	604
1939.....	517	95	612
1938.....	510	60	570
January-March:			
1941.....	1,834	240	2,074
1940.....	1,699	291	1,990
1939.....	1,581	192	1,773
1938.....	1,636	108	1,744

WHEAT: Good Crop

Good prospects for the winter wheat crop were reported for most areas last month, except in northern Missouri and portions of adjoining States where considerable winter wheat was killed by cold weather last November. A total crop of 616 million bushels of winter wheat was forecast on the basis of a projected yield of 13.3 bushels per acre seeded. This compares with 589 million bushels produced last year, and with 569 million average during the 10 years 1930-39.

Total wheat supply for 1941-42 may total approximately 1,200 million bushels, as compared with 1,099 million bushels for 1940-41. The 1941-42 figure includes winter wheat, spring wheat, and the largest carryover on record. Unless exports are increased—and this is unlikely—the carryover of wheat in July 1942 will total 500 million bushels, or approximately 75 percent of the domestic disappearance of wheat in a full year.

RICE: Outlook

Features of the rice situation and outlook for 1941-42 include prospects for an increase in seeded acreage in 1941 over 1940, a continued high level of domestic disappearance, a continuation of the larger-than-usual exports which developed in 1940-41, and a small carry-over at the beginning of the new season. Prices of rice in mid-April were the highest since December 1935.

COTTON: Prices Up

A new cotton crop has been planted, but an official report on acreage will not be available until July. Meanwhile, prices have been around the best levels for this season, and considerable loan cotton has been repossessed by producers. Domestic mill consumption of cotton continues at an unusually high rate, with no cessation in sight, and the possibilities are that consumption for the full year

will be more than 9½ million bales—the largest on record.

The cotton export situation shows no improvement, currently or in prospect. Total exports from last August through April were only 900 thousand bales, as contrasted with nearly 5.7 million bales during the like period a year earlier. Cotton mill consumption has been reduced in most foreign countries, and most of the export business that exists is in foreign cotton which is lower priced than American.

FEED: Ample

Production of feed grains this year may total 95 million tons. This figure is projected on the assumption that the acreage planted will be slightly smaller than in 1940, but that yields of corn will be above average because of the use of hybrid corn. Production of feed grains last year totaled 99 million tons. * * * But the total supply of feed grain for 1941-42 may be a near-record, on account of a prospective large carry-over from last year's crops.

(April 1 stocks of corn were the largest on record for that date, totaling 1,423 million bushels, as compared with 1,402 million bushels on the same date last year, and with 874 million bushels average for April 1 during the 5 years 1929-33. Of total stocks on April 1 this year, about 295 million bushels were sealed on farms, and 231 million bushels were held by the Government in steel bins and country and terminal elevators.)

As part of its food-expansion program, the Department of Agriculture has announced that the existing corn-loan program will be continued through 1941 and 1942; that the policy of making loan corn available to producers at the loan rate plus certain carrying charges will be continued; that producers in the commercial corn area who cooperate in the Agricultural Conservation Program will be allowed

to increase corn acreage up to their usual acreage, but that producers making such increases will not receive corn payments and will not be eligible for corn loans.

No referendum on corn marketing quotas will be held this year.

HOGS: Increase

Farmers are being urged by the Federal Government to increase pork production by feeding hogs to heavier weights this spring and summer, and by increasing the number of sows to be bred to farrow next fall. Inducement is that prices will be supported so as to yield a favorable corn-hog price ratio. Reason for the expansion program is that domestic consumer demand for food is increasing, and that products are wanted for export under provisions of the Lease-Lend Act.

Farmers indicated last winter they would breed 14 percent fewer sows for production of pigs this spring as compared with last. Prices subsequently improved, and it is possible that the 1941 spring pig crop may be larger than was indicated by this figure. Official reports on the size of the crop will not be available until June. Meanwhile, inducements are being offered producers to feed hogs to heavier weights; differentials in prices paid by the Government favor heavy as contrasted with light hogs.

The Department of Agriculture has announced that hog prices will be supported at a long-term level of \$9, Chicago basis, over a period ending June 30, 1943. Hog prices will be supported by purchases of hog products in the open market. In making such purchases consideration will be given the seasonal variations in prices and changing price relationships. The program *does not provide for a fixed price of hogs*. In case of speculative price increases, Government purchases of pork and lard may be released upon the open market,

CATTLE: Marketings

Cattlemen are being urged by the Department of Agriculture to increase their marketings of cattle for slaughter this year. Consumer demand is increasing, and larger marketings now may net producers a larger income than a few years hence when marketings may become excessively heavy in relation to consumer buying power. Cattle are among the few farm commodities now selling above parity.

Cattle on feed in the Corn Belt totaled 16 percent more on April 1 this year than last. (Ohio was the only Corn Belt State showing a decrease.) Market supplies of these fed cattle will be larger in the next few months than in the like period last year, but most of the increase will probably be in late summer and fall. Reports indicate that calves and light-weight feeder cattle were a larger proportion of the total number of cattle fed this season as compared with last.

Despite increased marketings this year, a continuing rise in consumer demand is expected to result in a generally higher level of cattle prices than in 1940. * * * Western range cattle came through the winter in good condition, and prospects for the 1941 calf crop have been generally good. Range conditions on April 1 were the best for that date since 1931.

LAMBS: Increase

Marketings of early lambs are fairly heavy now. The lambs are of better-than-average quality, and prices are higher than at this time last year. Grass-fat yearlings from Texas also are being marketed in volume. Sheep wintered well in the Western States, where favorable prospects for the late lamb crop were reported last month. (Lamb prices usually hold up well until June, but some decline ordinarily occurs in summer.)

The situation in early lambing

States and regions: California—slow finishing of lambs may delay marketings; Arizona—development of early lambs retarded by rain and soft feed; Texas—shipments expected to exceed those of a year ago; Southeastern States—unusually large number of ewes lambed before April 1, number of lambs saved was relatively large; Corn Belt—late spring in most areas of this region, but lambs in Missouri (principal early lambing State) made good progress; Northwestern States—favorable weather and feed conditions for development of early lambs, marketings may be earlier than usual.

WOOL: Higher Priced

United States production of wool this year will probably set a new high record. Mill consumption is at record high levels, the carryover of wool into the current season that began on April 1 was small, and large imports of foreign wool will be required to supplement domestic production. The 1941 domestic clip is selling at higher prices than the output last year, the cash income of wool producers likely will exceed last year's total of 110 million dollars.

Highlights of the current situation include continued large orders for wool fabrics for Army use * * * a high level of income of industrial workers * * * a weekly rate of consumption of apparel wool (scoured basis) the highest in more than 20 years * * * narrowing of the spread between prices of domestic and foreign wools.

Imports of apparel wool in the early months of this year were the largest since 1921. Supplies in South Africa and Australia probably are relatively large, but the growing shortage of shipping space and advancing freight rates will likely tend to restrict exports from these countries.

Imports of wool from Argentina and Uruguay have been unusually large in recent months.

FATS, OILS: Up

Domestic fats and oils stand in the best price position in several years. Notable has been the advance in prices of lard in recent months, as production has fallen below 1940 output. BAE looks for a stronger domestic demand for fats and oils the remainder of this year. An additional strengthening factor is that imports will be restricted by a reduction in available shipping space and by higher ocean shipping costs.

United States exports to Great Britain will probably increase, but exports to continental Europe have been practically shut off * * * It is expected that prices of domestic oilseeds will reflect any sustained rise in prices of vegetable oils in this country. But with abundant supplies of feedstuffs, and with prices of domestic oilcake meals at comparatively low levels, the price gains for oilseeds likely will be more moderate than for oils.

DAIRY: Increase

An adjusted program to increase the supply of food for national defense and Government purchases for export under the Lease-Lend Act calls for increased production of milk and manufactured dairy products this year. Increases are being sought through Government support to prices at levels favorable to dairy production; it is expected that the gains will be obtained through supplemental feeding of grains during the pasture season.

Production of milk is expected to reach a new high record next month, and to be maintained above last year's total during the remainder of the year. Increases among the manufactured dairy products are wanted especially in concentrated products such as evaporated milk, and cheese for export. Production of these products could be increased by paying higher prices for them in relation to butter.

Under the expansion program, large quantities of concentrated dairy products could be exported and still leave supplies for domestic consumption at least as large as in 1940 when production and consumption of milk and dairy products were the largest on Government record.

TRUCK CROPS: Supply

Government truck crop specialists report that somewhat larger acreages of most spring truck crops had been planted this season than last but that unfavorable weather reduced yields and in some instances caused complete crop failure. There was considerable replanting of lost acreages in some cases, and this has resulted in a late harvest. The situation indicated the possibility of a heavy concentration of marketings this month and next, and the likelihood that prices of truck crops in general would trend downward during this period. Even so, prices may average slightly higher than in the like period of last year, since consumer buying power is much improved over that of last season.

April reports indicated that more vegetable seeds of nearly all kinds will be harvested this year than last. Basis is an increase in both acreages and yields. Especially large increases in production were indicated for mangelwurzel, leek, spinach, mustard, cabbage, kale, eggplant, cucumber, Swiss chard, and nonsweet corn. Decreases in production were indicated for salsify, lima beans, and parsnips.

CANNING CROPS: Program

A program to expand the production of tomatoes for canning by 50 percent to meet probable demands for canned tomatoes under the Lend-Lease Act, and for distribution by the American Red Cross as well as for school lunch, relief and other purposes, was announced last month by Secretary Wickard. Smaller quantities of peas, corn, and snap beans may also

be purchased from time to time. It was announced that the Federal Surplus Commodities Corporation, in considering bids, will make allowance for increases of from \$2.75 to \$3.00 per ton of tomatoes over 1940 contract prices to growers. Growers who participate in this program will not incur any deductions from their AAA payments because of increases in acreages for canning.

FRUITS: Big Supply

Market supplies of strawberries have been unusually large this season, but consumer demand is good, and returns to growers should be better this year than last. Estimates are that production of early strawberries totaled 2.5 million crates, as compared with 2.0 million last year; that the second-early crop (normally marketed during May) totals 4.3 million crates, as compared with 3.1 million in 1940.

Figures on supplies of apples indicated in late April that there would be 2 million bushels more apples to be marketed during the remainder of the season as contrasted with the like period last year. But consumer buying power is higher this season than last, and apples have been selling at higher prices than a year ago. . . . April figures also indicated larger supplies of oranges and grapefruit this season than last. Oranges have been selling higher than in 1940; grapefruit have been selling lower.

Unusually large supplies of dried prunes will be carried over into the 1941-42 marketing season; but supplies of raisins are below normal proportions. Estimates of carry-over of dried fruits available for regular trade channels total 92,000 tons of dried prunes, 17,000 tons of raisins, and 5,100 tons of dried apricots. In addition, it is likely that a part or all of the 33,000 tons of dried prunes and the 31,000 tons of raisins in the surplus pools will be carried over.

POULTRY: Increase

Output of chicks by commercial hatcheries in the first quarter of 1941 was the largest on record for that time of year. Increases are expected in the second quarter, stimulated now by the Government poultry and egg expansion program. Production of commercial broilers in the first quarter of this year also was the largest on record for that period.

These increases indicate that supplies of chicken meat will be larger in the second half of 1941 than in the like period of 1940. But consumer demand continues to rise, and prices of chickens will average higher this year than last. Turkeys also are expected to sell for higher prices this year than last, even though the number marketed may be the same as in 1940.

EGGS: Increase

A considerable increase in total production of eggs is expected to result from the Nation-wide drive by the Department of Agriculture "to produce every possible egg from present laying flocks this spring and summer." Poultry specialists say this goal can be achieved by ample feeding and by filling the Nation's poultry houses to capacity with laying birds this fall.

Feed supplies are plentiful, prices of feed are moderate, and the Department has announced it will support prices at levels remunerative to producers. Ample feeding means that egg production, which usually begins to decline in June, should remain at relatively higher levels in the late summer months. The Department says that an increase of about 15 percent in chicks raised this year compared with last is advisable in order to fill poultry houses to capacity this fall and next spring with laying hens.

The feed-egg price ratio is much more favorable to producers than at this time last year.

FRANK GEORGE.

THE TAX OUTLOOK FOR FARMERS

AMERICA'S defense-and-aid program will add about 40 billion dollars to Federal expenditures during the next few years. It is generally agreed that a large part of these increased expenditures should be met as they are incurred by increased taxes paid especially by those whose incomes expand as a result of defense spending. With this in prospect and with rapidly changing developments in the economic life of the Nation, questions arise touching the probable influence of our defense efforts on the tax payments of farmers.

Will State and local taxes, hitherto the most important paid by farmers, increase markedly in the years immediately ahead? Will new taxes levied by the Federal Government or revision of existing revenue measures add substantially to the tax payments of farmers? Will farmers contribute heavily to defense by payment of taxes levied on others and hidden in the price of things purchased or sold? Such questions while specific enough and very pertinent admit of answers which can indicate only the probabilities. In the nature of things the answers cannot be conclusive.

THE clue to what is a reasonable expectation for the near-term trend of the more important farm taxes is the probable behavior of State and local governmental expenditures. If these remain reasonably stable supporting taxes will have no reason to advance sharply. Unless there should develop unforeseen changes in the pattern of services rendered by State and local governments—and World War experience does not indicate that this is probable—no important change in expenditures is in prospect for the period of our defense effort save such as might arise because of advancing prices of commodities purchased and salaries and wages paid by these governmental units.

During the World War period general departmental expenses of States as reported to the Bureau of the Census showed the following percentage increases over 1915: 1916, 6.4 percent; 1917, 12.5 percent; 1918, 25.0 percent; 1919, 43.2 percent. Comparable data for this period are not available for all local governments, but similar data for 146 cities indicate that for the period as a whole the increase in municipal

general departmental expense was somewhat less than 28 percent. From these figures the inference seems warranted that State and local general departmental expenditures rose very moderately under the lifting influence of the general inflation of the period.

That the increases in general departmental expenses were much less than increases in the price level and many classifications of wages is partially ex-

Index Numbers of Wholesale Prices and Selected Expenditures of States and Cities

(1915=100)

Year	Wholesale prices ¹	48 States ²		146 cities ²	
		General departmental expenditures and interest	Capital outlays	General departmental expenditures and interest	Capital outlays
1916...	126	106	89	-----	-----
1917...	175	112	71	108	86
1918...	193	125	70	-----	-----
1919...	205	142	75	127	77

¹ Based on Bureau of Labor Statistics' index.

² Based on expenditures reported to Bureau of the Census.

plained by the fact that payments for governmental services are frequently controlled by law. This makes them relatively unresponsive to the price-lifting pressures of an inflationary period. Unmeasurable, but not without influence after 1917, was the pressure to curtail civilian and, by implication, State and local government expenditures in order to permit fullest availability of national resources to the Federal Government. As is to be expected, this is clearly revealed in the reduction of outlays for capital expansion. But it may also have been a force which kept operating expenses in check.

After the conclusion of hostilities and demobilization there was a pronounced upsurge in State and local expenditures. Not only were deferred expenditures for permanent improvements now rapidly made good, but general departmental expenditures also rose sharply. By 1922, despite a sharp reduction in the price level following 1920, State and local expenditures were on a distinctly higher level.

IN THE present situation possible inflationary pressure to raise State and local expenditures may in many cases be temporarily offset by reduction in current relief outlays. The general business and industrial activity that is essential to support higher prices and wages should simultaneously reduce unemployment. The effects of improved industrial activity are quickly realized in lowered relief costs. According to data compiled by the Social Security Board payments for general relief made by State and local governments in 33 States for which comparable information was available fell 21.5 percent from November 1939 to November 1940. If the Federal Government succeeds in efforts to keep prices and wages from rising markedly despite feverish industrial activity the expenditures of State and local governments may conceivably decline.

All things considered it seems safe to conclude that for the immediate future no increase of consequence in State and local expenditures is to be expected. This prospect warrants the conclusion that the farmers' tax bill for State and local government will not be increased significantly by the defense effort unless and until reductions that occur in relief expenditures and emergency deferments are more than offset by price advances that increase the cost of government.

THE Federal tax legislation of 1940 did not add substantially to farmers' tax payments except as the increases in excise taxes, notably those on motor vehicles, gasoline and lubricating oil, are paid by farmers. How much the reduction in personal exemptions to \$800 for single and \$2,000 for married men will add to Federal income tax payments of farmers is not known, but the probabilities are that the increase will not be great. Whether the Federal Government will levy new taxes that will add substantially to those now paid by farmers remains to be seen. The tendency so far has been to continue the conventional Federal taxes and to emphasize the taxation of surplus income especially as it may accrue to business corporations during our defense effort. A general sales tax, often mentioned as a defense measure, does not now appear to have general support. If levied it would add substantially to the tax burden of consumers including farmers.

ANY appraisal of tax burdens must consider the possibility that taxes levied on one individual or group are transferred to others disguised in altered prices. The possibility that important defense taxes may be so shifted deserves examination. Is it probable that the corporation net-income and the excess profits taxes,

the individual net-income tax and the excises are so shifted?

Without attempting to be exhaustive and confining discussion to the particular problem of shifting it may be said that economists are in substantial agreement that taxes levied on the net income of corporations—including excess profits—are not commonly transferred to others through price changes. Supporting this view is the consideration that for many corporations competitive conditions are such that market prices must be accepted as beyond their individual control. Additional support is found in the fact that changes in prices are not apt to occur because of tax-induced changes in market supplies. Taxes on corporate net income are not costs of production. They represent fractions of what is left after costs have been met. Their payment therefore does not influence the volume of output that each unit finds most advantageous. Neither do such taxes affect the output of competing firms which are exempt either because of a non-corporate form of organization or because of unprofitable operations. Hence the total supplies offered the market will remain substantially unaffected and prices unchanged.

WHERE competition is less perfect and individual firms have some freedom in determining prices the probabilities that the corporation net-income tax will inspire price changes are small. This is so because payment of the tax bestows upon the corporation no new power to alter prices, and no particular incentive to do so. The price relations that are most advantageous to the corporation before such tax is paid remain so after. Treasury participation in the net earnings will not change the prices at which such earnings are greatest. To attempt to shift the tax would result in reducing what is left to the corporation. In the interest of stockholders themselves prices are best left unchanged.

For these reasons any marked changes in prices that may appear during our defense effort will not be the result of successful shifting of corporate net income and excess profits taxes. The causes will lie elsewhere. Distasteful and burdensome as these taxes may be, corporation management as a rule has no satisfactory way to unload them.

Similarly the individual net-income tax successfully resists all efforts to shift it. Avoidance of the tax is indeed possible—by the unlikely process of foregoing income. But if income is received and the tax paid there is no way to transfer it to others. The basic reason is the same as for the corporation tax. Such payments bestow no new power to determine prices. They must be borne by the original payer.

UNLIKE the taxes so far discussed the excises are generally shifted. It is to be expected that any increase in excise taxes on tobacco, liquor, gasoline, and the like, will raise the price at which these commodities are sold or will depress the price of materials entering into their manufacture. On occasion it will do both.

In what significant ways do such taxes differ from the net-income taxes which, as we have seen, defy attempts to shift them?

Most important is the fact that these taxes are levied in such a way as to be unavoidable costs of production. A tax on each gallon of gasoline sold is as inescapable a cost as the outlay for crude oil or labor. No gasoline comes to market on which the refiner or blender has not incurred special expense by paying the tax. Under such circumstances it is only a matter of time until the pressure exerted by an increase in the tax affects related prices. The greater part of such taxes is shifted forward in higher prices to consumers. Some are thrown back at least in part upon the suppliers of raw materials and labor. Only if

the tax is insignificant in amount will it be absorbed by the original payer.

IN summary it may be said that the defense effort has so far not added materially to the tax load of farmers except as they are paying somewhat higher Federal excise taxes than a year ago. The future, however, promises larger payments. If inflation can be largely avoided no significant increase in State and local taxes need be anticipated. Increased taxes will be connected with Federal needs. To the extent that the Government satisfies its tax requirements through increases in the rates levied on excess profits and corporate and individual net incomes the farmers will be largely

spared. But the vast sums to be spent on defense can hardly be raised by such taxes supplemented only by loans representing actual savings. Thus the choice is between two general alternatives. Provisions must be made for new measures which like the general sales tax compel heavy contributions from all income groups, or we shall drift into inflation. Inflation, highly objectionable on other counts, is in itself a harsh taxing device. For the vast majority inflation would be a regrettable choice. Farmers like most other groups have a definite interest in avoidance of fiscal measures that encourage its development.

ALVIN S. TOSTLEBE.

Decline in Farm Mortgage Debt

FARMERS owed 6.9 billion dollars of farm mortgages as of January 1, 1940. This compares with 7.1 billion in 1939, and with the all-time high of 10.8 billion in 1923. The debt at the beginning of 1940 was the smallest since 1919, but much of the reduction during this 22-year period represents foreclosures during the depression of

the early 1930's. The reduction in recent years has been more the result of improved farm economic conditions and the Government efforts to relieve the strain of mortgage debt on farmers.

Most of the reduction in debt during 1939 was in mortgages held by the Federal land banks and Land Bank Commissioner. Together, these two

Total Farm Mortgage Debt and Amounts Held by Selected Lender Groups, United States,¹ Jan. 1, 1910, 1915, 1920, 1925, 1930, 1935-40

Year	Total farm mortgage debt	Federal land banks and Land Bank Commissioner	Joint stock land banks ²	Life insurance companies	Banks ³	State credit agencies ⁴	Others ⁵
	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>
1910	3,207,863			386,961	406,248		2,414,654
1915	4,990,785			669,984	746,111		3,574,690
1920	8,448,772	296,386	60,038	974,826	1,204,383	(6)	5,913,139
1925	9,912,650	923,077	446,429	1,942,624	1,200,456	(6)	5,400,064
1930	9,630,768	1,185,765	626,980	2,105,477	997,468	93,274	4,621,804
1935	7,785,971	2,501,824	255,931	1,258,900	498,842	62,286	3,208,188
1936	7,638,867	2,853,966	175,677	1,054,770	487,505	48,091	3,018,858
1937	7,389,797	2,888,912	133,499	936,454	487,534	32,657	2,910,741
1938	7,214,138	2,835,962	104,163	895,470	501,450	24,657	2,852,436
1939	7,070,896	2,723,022	87,362	887,336	519,276	17,281	2,836,619
1940	6,909,794	2,583,901	65,719	883,414	534,170	14,823	2,827,767

¹ Excluding possessions.

² Including banks in receivership.

³ 1935-40 insured commercial banks; prior to 1935 open State and national banks.

⁴ Rural Credit Board of South Dakota, Bank of North Dakota, and Department of Rural Credit of Minnesota.

⁵ Including loans of individuals, Farm Security Administration, mortgage companies, and other miscellaneous lenders.

⁶ Unavailable.

lending agencies held 2.6 billion dollars of farm mortgages at the beginning of 1940, as compared with 2.7 billion in 1939. (As of September 30 last, about 24 percent of the number of loans by these two agencies were delinquent.) Other institutional lenders showing reductions included the life insurance companies, joint stock land banks, and State credit agencies.

The life insurance companies held less than 900 million dollars of farm

mortgage debt at the beginning of 1940, as contrasted with 2 billion dollars at the beginning of 1930. Approximately 70 percent of the debt held by these companies is on farms in the North Central States—especially in Iowa, Indiana, Illinois, and Missouri. At the beginning of 1940 the mortgages held by the life insurance companies represented 2.9 percent of their assets, as contrasted with 3.1 percent in 1939.

Farm Products: Producer to Consumer

II: At Country Points

IN THE evolution of our marketing system for farm products the farmer has continually been making adjustments and acquiring knowledge and experience which better equips him to handle his marketing problems. The economic world in which he lives, however, is dynamic and not static and conditions have been constantly changing. New technological processes are continually being developed and these have contributed to changes in marketing and have affected the farmer's position in the marketing structure. The trend in country market organization and facilities has been largely in the direction of greater complexity, with outlets to the farmer increasing, new types of processing plants being developed, and competitive relationships changing. The basic reason for much of the change that has occurred, therefore, has been technological developments, especially in the field of transportation and in processing techniques.

PRIOR to the development of the railroads inland transportation was limited to the rivers and canals and what could be carried by wagon over very poor highways. The farmer then was greatly restricted in the choice of

markets and as to marketing methods. The shipment of perishable products any great distance was not to be considered.

From about 1850 until shortly after the World War, the railroads were the dominating transportation medium; and during this 70-year period they not only facilitated the development of new producing areas but very largely determined the marketing methods and practices followed. They contributed to the establishment of many public stockyard markets, grain elevators, and other facilities used in the marketing of farm products. Refrigerator cars for transporting fresh meats came into use after 1870 and were first used for shipping fruits and vegetables in 1885. These cars revolutionized the marketing system for all perishables by bringing the large distributing centers within reach of the most distant producing areas, and thus not only increased available supplies but stimulated competition between areas and between different groups of farmers. In the last two decades the motortruck came into the picture, and with it came a further evolution of the marketing system which has affected many groups, and especially the farmer.

PRIOR to the coming of the motor-truck, the size of the railroad car in use tended to determine the unit of wholesale trading in some commodities; and this, together with minimum carload freight tariffs, often restricted farmers in their sales outlets. For instance, a livestock producer who did not have sufficient animals ready for market to make the minimum carload weight on which the full rate had to be paid was practically compelled to sell to a local buyer unless a neighbor would join with him in making up the weight deficiency. It was primarily this situation that caused farmers to organize livestock shipping associations in such large numbers in the period from 1912 to about 1925. They believed that the local buyer took too large a toll for his services and that higher net returns could be obtained if they pooled their stock so as to make full carloads and thus could ship to the large central markets.

Similar cooperative movements developed among producers of other commodities because of conditions which placed farmers at a disadvantage in the marketing of their products as individuals. All occurred largely during the period when farm products moved almost entirely by rail and the general practice was to send them to large central markets or concentration centers, either for processing or for redistribution to other points as needed. In almost every instance, these cooperative movements originated out of the dissatisfaction of farmers with the net returns for their products and with the marketing facilities available to them.

THE flexibility of motortruck transportation, both with respect to size of loads and time and direction of movement, made farmers less dependent on certain types of local cooperative organizations. Many of these organizations ceased operation after motortrucks came into more general use. This was especially true of livestock shipping associations, cooperative creameries, and cheese factories,

and many of the smaller organizations engaged in marketing poultry and eggs.

In general, the motortruck has tended to "individualize" farm marketing by making it possible for the farmer to sell as an individual rather than through a local cooperative association or a terminal agency. It has made more outlets available to him and has made country marketing more competitive. It has removed all restrictions as to unit of trading, size of load, time of shipping, and direction of movement, and has speeded up the movement of products. It has made the farmer less dependent on certain types of middlemen and to some extent has reduced the risks he formerly incurred from price declines while his product was en route to the central market. In order to take advantage of these new conditions the farmer, however, must have a better knowledge of grades and grading, more complete information as to demand and prices, and be more shrewd in the selection of his markets and in bargaining.

THE trend in cooperative marketing in more recent years has been toward larger organizations operating on a regional or Nation-wide basis, and the discontinuance of the small local associations which existed primarily to enable farmers to assemble small lots of products into carload units. These larger cooperative organizations function primarily as distributing and bargaining agents for their members in the sale of products to processors and other wholesale buyers. In some instances, especially those engaged in marketing fruits and vegetables, they also supervise all operations of assembling, sorting, grading, and shipping.

Producers who are not members of cooperative marketing associations do their own bargaining with prospective buyers or make use of the services of selling agents who operate on a commission or brokerage basis. These selling agents are more generally employed when sales are made at the

larger markets and distributing centers. There has been an increasing trend in recent years, however, for the producer to do his own bargaining and to sell direct, either at his farm or at some nearby concentration point or processing plant. These direct sales are to buyers who operate for their own account or as agents for a processor, wholesaler, or chain-store organization. Many of these buyers are classed as local or country buyers as distinguished from those operating on the central markets. They include local merchants, operators of local elevators, mills, cotton gins, creameries, or other processing plants, in or near the farmer's community, and those who personally bargain with the farmer at his farm or local shipping point and take delivery there. Sales to these country buyers comprise a larger proportion of farmers' total sales of all farm products than those made in any other way. While this method of selling on the part of farmers has tended to increase in recent years, there apparently have been some changes as to the types of local buyers. Sales to local stores have decreased but sales direct to processors, chain stores, and those who specialize in particular commodities have increased.

MENTION has been made that when the producer is his own selling agent, it is necessary that he be well informed regarding current prices and supply and demand conditions, otherwise he cannot bargain intelligently. To interpret market reports correctly, he also must have a fairly good knowledge of the grades on which prices are based, how grading is done, and the factors which determine grade. Information regarding consumer preferences as to grade also is helpful in planning his production as well as in appraising the market.

The last 20 years have witnessed great progress in the collection and dissemination of market information by the Department of Agriculture for the benefit of farmers and in the edu-

cation of farmers regarding marketing and the economic factors affecting the demand for their products. Information regarding current prices and supply and demand conditions at practically all important trading centers is now collected daily by trained reporters and broadcast by radio almost as rapidly as it is assembled. It is also distributed by mail and made available through the daily press. In addition, comprehensive analyses of the economic situation with respect to individual commodities are prepared by Department and State agricultural college specialists for release to the public from time to time, as conditions warrant.

The producer has much more and better market information available than ever before. His problem is to interpret it correctly. It must be remembered, however, that the marketing of farm products, like any specialized business, has its own technique and terminology which can be understood fully only after considerable experience and study. Producers who have had this experience obviously are in better position to use the Government market reports in bargaining for the sale of their products than those without it.

ONE of the great needs of producers in the selling of their products is more progress in grade standardization, a better understanding of grades and consumer preferences, and a more general practice of buying and selling on the basis of grade. Progress has been made in this field, but there is much yet to be done. In some products it has been especially difficult to define sharply the grades that have been proposed or established because the factors which determine the grade are not readily subject to physical measurement or test. The grades in such instances have to be delineated or described largely in abstract terms; and, consequently, they are not always interpreted the same way by different individuals. One obstacle that has

prevented greater accomplishment in standardization is that buyers and sellers frequently prefer to trade in ungraded lots in the belief that they can out-bargain the other party in the deal, and that a combination of grades will facilitate getting more favorable price terms than when each grade is sold separately.

IT should be emphasized that country marketing or that part of the marketing system in which farmers have direct personal contact is only one segment of the entire marketing structure. While possibly some econ-

omies in marketing costs might be effected here they would be small in relation to the total marketing spread. Developments in retailing, wholesaling and terminal market handling also are important to the farmer and the consumer, and changes in competitive relationships and costs in these more remote functions may affect the farmer even more than any that might occur in country marketing.

CHARLES A. BURMEISTER.

Practices and problems in the transportation of farm products from country points will be discussed next month.

Our Changed Farm Economy

THE estimates of gross and cash income from farm production currently published by the BAE may now be supplemented by estimates covering a much longer period. The current estimates are being made available for the years from 1910 to date. The supplementary estimates, an outgrowth of a joint research project of the BAE and the National Bureau of Economic Research, cover the period 1869 to 1937. This study supplies a much needed long-time record of production, prices and gross income by commodities and groups of commodities. These data have been prepared both on a crop year and calendar year basis to serve various purposes, and appropriate indexes of production, prices and income have been computed.¹

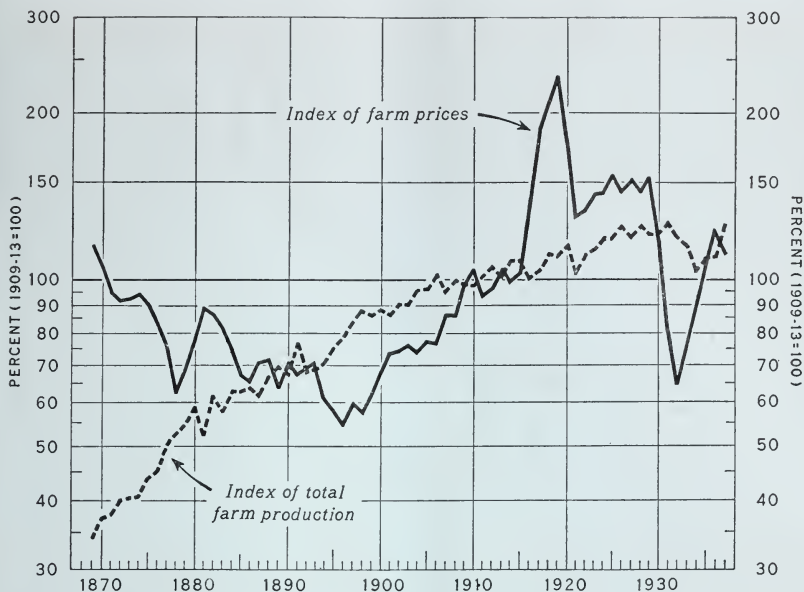
With these long-time estimates in hand, it is now possible to describe the long-time shifts in agriculture in terms of income as well as acreage and production. For example, livestock (chiefly meat animals) supplied about

40 percent of the gross income from all farm production in 1869 and only 26 percent in 1929, whereas the relative importance of dairy production as a source of income advanced from 16 percent to 33 percent in the 60-year period. Fruits also more than doubled in relative importance, rising from 2 percent of gross income in 1869 to 5 percent in 1929, while staple foods (including cereals, potatoes, beans, and rice) declined from 16 percent to 11 percent. The share contributed by textile raw materials (cotton, wool, flax) remained unchanged at about 15 percent of the total.

Changes in Gross Income From Farm Production Between 1869 and 1929

Products	Percent of total		Percent Increase in dollar values 1869-1929
	1869	1929	
	Percent	Percent	Percent
Staple foodstuffs.....	16	11	222
Fruits.....	2	5	1035
Dairy and poultry products.....	16	33	823
Textile raw materials.....	15	15	381
Livestock.....	40	26	207
Other.....	11	10	262
Total.....	100	100	350

¹ USDA Technical Bulletin 703, December 1940 *Gross Farm Income and Indices of Farm Production and Prices in the United States, 1869-1937*, by Frederick Strauss and Louis H. Bean.



OUR knowledge of the long-time trend in agricultural production for all farm products as a whole is based chiefly on the official index of agricultural production covering 12 important crops. The present study now provides an index of total production including livestock and livestock products as well as crops. This more inclusive measure of production covering both crops and livestock differs little from the indices of crops alone up to about 1920, but from then on there is considerable divergence, the more comprehensive index continuing in line with the upward trend of the previous decade. This reflects chiefly the marked increase in the production of dairy and poultry products and truck crops, and production of livestock and livestock products per unit of feed crops.

The only index of prices received by producers starting before the World War heretofore available has been the index published by the BAE for the period 1910 to date. The present study makes available such a price index from 1869 to date, constructed in such a way as to be directly comparable with the long-time index of

production. These two indexes are shown in the above chart.

THE course of average prices received by farmers has been dominated chiefly by monetary and business conditions and only partly by changes in the aggregate volume of farm production. In a number of individual commodities dealt with in this study, it will be found that the variations in production assume greater importance as a price factor than is the case where all farm products combined are dealt with. Even in the general illustration contained in the chart it is evident that the average of prices of farm products is affected by the course of farm production in general. Thus, during the downward course of prices of the 1870's, 1880's, and 1890's, there were three periods when production exceeded the long-time trend—the late 1870's, the late 1880's, and the late 1890's. In the first and third of these periods, the large volume of production intensified the decline in farm prices that was due to other causes, and in the other it prevented farm prices from responding fully to the prosperity con-



ditions in the domestic markets. The rise in farm prices from the 1890's to 1914 was somewhat more regular than was the decline during the period after the Civil War, but here, too, the effect of volume in excess of normal on price is apparent, particularly in the years 1904-6.

After 1914 several highly distinct price periods are evident: (1) The inflation and deflation associated with the World War; (2) the sustained and relatively stable price situation of the 1920's; (3) the second major post-war price collapse between 1929 and 1932; (4) the rise between 1932 and 1937 associated with economic recovery, including devaluation of currency, Government expenditures, and two record droughts (1934 and 1936); and (5) the decline in 1937-38 associated with a decline in general business conditions and a return to conditions of surplus agricultural production and supplies.

THE variations in gross income from farm production that resulted from these long-time and short-time changes in production and prices are shown in the above chart. During the 25-year period ending with 1896, it is clear that gross income rose only moderately, the rapid expansion in production being nearly offset by the accompanying decline in prices.

The effect of variations in business conditions and in domestic demand is suggested in the cycles in income which reached their peaks in the prosperity periods of 1881-82 and 1891-92. From 1896 to 1914 the year-to-year variations in gross income are overshadowed by the very marked long-time upward trend. If the rise and fall in farm income associated with the World War is set aside, the long-time upward trend that started after 1896 may be said to have terminated in 1929. The decade since then may be described for the present as one of a downward trend in gross farm income, with marked departures below that downward trend in 1932, and above that trend in 1937. In fact, the entire period after the World War may now be described as one during which agricultural prices and income followed a downward course as they did after the Civil War, with two periods of prices and income markedly below the course of the downward trend (typified by 1921 and 1932) and two periods of prices and income above the course of the downward trend (typified by 1925-29 and 1937). These long-time records should give additional bases for comparison as the abnormal situations of the 1940's unfold.

L. H. BEAN.

Modern Farm Practice and Mechanical Power

AN almost complete revolution of farm power has occurred during the past 30 years. In 1910, the automobile, tractor, and truck were very much an oddity on farms. The horse, buggy, and animal-powered equipment were accepted modes of the farm. There are on farms today about 60 automobiles, 25 tractors, and 15 motortrucks for every 90 farms. Some areas and some farms have more than this quota of machines, many farms have none. Probably more than half the farmers own at least one of these machines. The use of motor units is greater, since many farmers not owning machines make use of tractors and trucks that do custom work.

Tractors are still being adopted rapidly, so that the proportion of machines to farmers is becoming greater every day. Since 1930, there have been only slight changes in the number of automobiles and trucks (table 1). But in these 10 years the number of tractors has nearly doubled. Factors of today that may accentuate this trend in tractor numbers are: (1) A reduction in the farm labor supply as defense demands for industrial labor increase; (2) a continued decrease in the number of horses and mules as demands for military use add to the difficulties raised by a lack of replacements; (3) the availability of efficient types of machines. A deterrent may be a reduction in available tractors and equipment, if defense demands for tanks and other mechanized equipment take over space now used in the production of farm implements.

THE use of machine power has changed the ways of farming and farm living, but animals and manpower are still used in varying degrees throughout the country. For ex-

ample, cradling grains is a hand method of harvest that is used for only 1 percent of our United States grain acreage, yet in the South about 20 percent of the grain is still cradled. In some areas, farm families can use an automobile to make available an urban or even metropolitan way of life; but, in other areas, the family rarely gets beyond the local crossroads. These changes in farm life are of vital interest to planning agencies concerned with the development of agricultural programs that are flexible enough to fit nearly all farm situations.

Some measurable types of change have recently been the subject of a survey by the Bureau of Agricultural Economics and the Agricultural Marketing Service. The use of tractor power, animal power, and hand methods in certain operations of producing and marketing major crops has been studied in a survey of 25,000 farms. Farmers reported conditions for their locality, so that the results are widely representative.

Tractors are used to the greatest extent in the Great Plains, the Corn Belt, the Pacific coast, and the Rocky Mountain States. They are fairly important in the northeastern dairy

Table 1.—Number of Tractors, Automobiles, Motor Trucks, Horses and Mules 2 years old and over, on Farms, and Number of Farms January 1, Specified Years ¹

Year	Trac- tors	Auto- mobiles	Motor trucks	Farms	Horses and mules
	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>
1910---	1	50	0	6,362	19,429
1915---	25	472	25	-----	21,866
1920---	246	2,146	139	6,448	22,386
1925---	549	3,283	459	6,372	21,038
1930---	920	4,135	900	6,289	17,981
1935---	1,048	3,642	890	6,812	15,471
1940---	1,610	4,185	935	6,091	13,368

¹ Data from Census, Bureau of Agricultural Economics, and Agricultural Marketing Service.
² Preliminary.

States, but are relatively unimportant in the South—that general area beginning with Louisiana and Arkansas on the west and including all States south of the Ohio River and below Maryland on the Atlantic coast. In general, tractors are used much more for heavy-duty jobs than for light work. For breaking land and disking, the study shows that tractors supply the power for more than 55 percent of the work done.

GREATEST advances of machine power and equipment in the production of major crops have been among the small-grain crops. Small-grain production is now relatively concentrated in broad, open areas that are favorable to the use of large machines. Thus, wheat and the Great Plains are practically synonymous; large acreages are also grown in the Pacific Northwest.

Machine methods have long been available for the various operations concerned with small-grain production. The major development of the past 30 years has been the substitution of the internal-combustion engine for animals and steam engines, but old methods and facilities have been streamlined and there have been other significant innovations and developments. Today, approximately 70 percent of breaking land, disking, and harvesting of small grains is done with machine power. Ninety percent of the small grains is marketed by machine. However, animal power is still important for the lighter jobs of drilling seed, and for harrowing. (Table 2.)

Extensive adoption of machine power has reduced greatly the need for labor in small-grain production. Even with equipment of the same size, more work can usually be done in a given time with machine power than with animal power. Reduction in labor varies among the small grains. At the present time, total farm labor expended for each acre of wheat harvested is probably somewhat less than

7 hours. Thirty years ago more than double this amount of labor was needed to grow, harvest, and market an acre of wheat.

IN the Southern Great Plains and in some major wheat areas, labor needs have been reduced as much as 75 percent, largely since 1920. With 60 million acres of wheat, farm employment in wheat production has been reduced by at least 40 million man-days. Displacement of labor is most pronounced during the harvest season and in the major wheat areas. Needs for regular monthly labor, especially for preparing the seedbed and for hauling grain, have also been reduced greatly.

Largely responsible for the labor saving effected in small-grain production has been the farm tractor. With larger power units available on many farms, larger equipment has come into general use, especially for preparing the land and seeding the crop. The combine has cut harvest labor needs by almost 75 percent. In many wheat areas, 3 men with a combine, a tractor, and a truck can now harvest and market or store the grain from 30 acres of wheat in a 10-hour day. Thus the harvest labor now amounts to but 1 hour per acre. Before the coming of the combine, the tractor, and the motortruck, about 4 hours of labor were used for harvesting with a header, for stack threshing, and for marketing the grain. Somewhat more labor was used with the binder-thresher method than with the header-thresher method.

HAY crops continue to be harvested largely with animal power. For the country as a whole, about 85 percent of the cutting of hay and the hauling or dragging of hay from fields to barns or stacks was done with animal power in 1939. Use of mechanical power in haymaking was relatively unimportant in practically all areas but was most pronounced in the Pacific Coast and New England States. Labor savings from the use of machine

Table 2.—Importance of Mechanical Power in the Production of Small Grains ¹

Geographic division	Percentage of work done with tractor power						Haul to market with—	
	Breaking land ²	Disking	Harrowing ³	Drilling seed	Harvesting		Auto and truck	Tractor
New England.....	30	49	50	9	26		81	-----
Middle Atlantic.....	48	61	49	10	45		89	1
East North Central.....	67	69	52	24	58		86	2
West North Central.....	78	74	61	53	75		89	1
South Atlantic.....	17	30	14	7	35		76	1
East South Central.....	14	25	10	5	29		72	1
West South Central.....	68	68	62	68	77		88	1
Mountain.....	75	69	56	57	64		93	-----
Pacific.....	79	82	69	68	79		96	1
United States.....	71	70	57	48	69		89	1

¹ Based on more than 25,000 reports obtained from crop correspondents, February 1940. The small grain crops include wheat, oats, barley, rye, flax, rice, buckwheat, and small grain mixtures.

² Includes plowing with moldboard and disk plows, listing, bedding, and middle busting.

³ Includes spike-tooth and spring-tooth harrowing.

power in haymaking are not very great, unless large-sized haymaking equipment is used. With the haymaking equipment available, most farmers generally prefer work stock for haymaking. The small hay acreages on many farms make it expensive to have hay equipment large enough to use effectively the available tractor power.

SINCE 1910, there has been a reduction of more than 25 percent in the amount of farm labor used in the production of an acre of corn. Most of this reduction has taken place since 1920. Shifts in corn acreage, larger teams, and the increasing use of large cultivators and other equipment have contributed somewhat to the reduced labor needs, but the tractor has contributed most to the reduction in use of labor in corn production. The tractor has increased greatly the power available on many farms, and the size of machines and implements has kept pace with the increased power. Also, the capacity of machines and other equipment is usually greater when operated with machine power than is the case for machines and equipment of corresponding size operated by animal power.

The sharpest reduction in utilization of labor in corn production has

taken place in the western and central Corn Belt. On many Corn Belt farms an acre of corn is now produced with about half the farm labor needed for its production 30 years ago.

The heavy-duty jobs of seedbed preparation have been the easiest to switch over to machine power, so that labor reduction and machine adoption have been greatest in operations such as breaking and disking land. The next steps of planting and cultivating are not so advantageous to mechanical power. For these operations, animals still do most of the work in the country as a whole. When it comes to cutting corn, the knife-swinging men are still laying down about 40 percent of the corn cut. Man really predominates in corn harvest operations. Only 13 percent of the corn for grain is harvested by mechanical pickers. Most of the remainder is husked or snapped by hand. (Table 3.)

COTTON growers use mechanical power to a lesser extent than do producers of any other major crop. But there are important areas where machine power is extensively used for preparing the seedbed, planting, cultivating, and hauling the seed cotton to gins. Use of mechanical power is most pronounced in the irrigated areas,

Table 3.—Importance of Tractor Power in Preparing Land, Planting, Cultivating and Cutting Corn, by Geographic Divisions, 1939 ¹

Geographic division	Percentage of work done with tractor—					
	Breaking land ²	Disking	Harrowing ³	Planting	Cultivating	Cutting corn
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
New England.....	40	51	39	9	13	14
Middle Atlantic.....	49	62	49	6	16	16
East North Central.....	70	72	55	7	42	17
West North Central.....	74	69	56	22	48	43
South Atlantic.....	13	24	11	1	3	2
East South Central.....	12	23	9	2	5	2
West South Central.....	27	30	21	16	16	22
Mountain.....	75	70	53	44	41	25
Pacific.....	71	73	56	20	25	17
United States.....	51	53	39	13	30	22

¹ Based on more than 25,000 schedules obtained from crop correspondents, February 1940. The above data are applicable to the 1939 crop.

² Includes plowing with moldboard and disk plows, listing, bedding, and middle busting.

³ Includes harrowing with spike-tooth and spring-tooth harrows.

especially in California and Arizona, but producers in the western cotton areas of Texas and Oklahoma and the black prairies of Texas also use machine power extensively. In the river bottom areas, the use of tractors has been increasing in recent years, but animal power is still principally used for producing cotton.

In cotton areas east of the Mississippi River, and in the western hilly areas of Arkansas, Louisiana, Texas, and Oklahoma, mechanical power is used only to a limited extent for growing the crop. There are several reasons for the relative slowness with which cotton growers have adopted machine power. Satisfactory and economical machine methods for harvesting the crop and for thinning and hoeing the crop are yet to be developed. These are important jobs and together normally utilize about two-thirds of the total labor needed for producing the crop. These jobs are still done by hand. The fact that farm labor must

be available for hoeing and picking tends to slow the adoption of machine power. Until satisfactory machines are developed for these jobs, general adoptions of machines for cotton production must lag.

Other factors such as small farms, rolling land, irregularly shaped fields, low wage rates, and low cotton prices, have been important factors which have retarded mechanization in the production of cotton. Since 1910, the amount of labor needed to produce an acre of cotton has been reduced about 20 percent. Increased work resulting from new demands such as weevil control and terracing has been more than offset by the use of more machine equipment, the opening up of western areas requiring less labor to produce cotton, and the more prevalent use in these new areas of harvest by snapping rather than picking.

A. P. BRODELL.

ROBERT C. TETRO.

Paid in Full

Farmers and ranchers in 1940 paid 30,300 Federal land bank and Land Bank Commissioner loans in full in advance of the time when due. Governor A. G. Black of the Farm Credit Administration says that this is the greatest number of loans paid in advance in any year since FCA was created, and brings to more than 141,000 the number paid off in this way since 1933.

PARITY PAYMENTS IN 1941

Rates of parity payments to be made to growers who plant within their 1941 acreage allotments of cotton, wheat, corn, rice, and tobacco were announced last month by the Department of Agriculture. Payments will be based on the normal yield of each producer's acreage allotment, and will be in addition to the regular agricultural conservation payments made to farmers under the 1941 Agricultural Adjustment Program.

The accompanying table shows the rates for conservation payments, parity payments, and total payments which will be made to cooperating farmers.

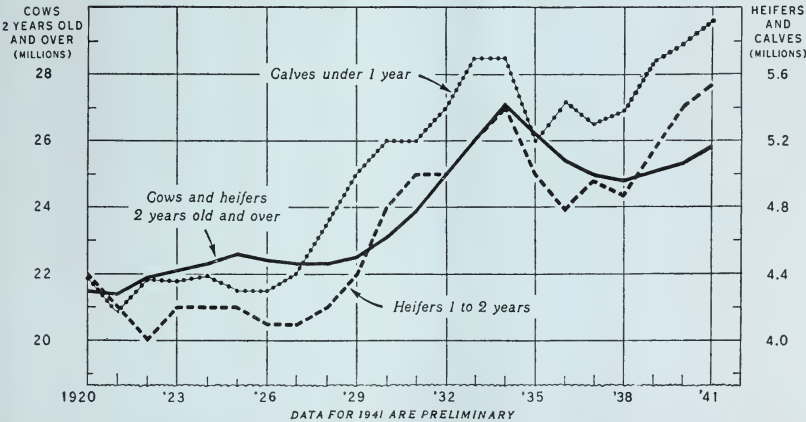
The only change in the procedure for determining rates for 1941 parity payments, as compared with the 1940 program, is that the "75-percent rule," formerly applying, has been eliminated. This rule provided that payments could not be made on crops which already were at 75 percent of

parity, and specified further that if farm prices of a commodity were less than 75 percent of parity, the payment could be large enough only to make up the difference. As a result, the parity rate for rice is higher than in 1940 and payments are being made on tobacco for the first time.

The 1941 parity rates will be applied to approximately the same production of wheat, corn, and rice as were the 1940 rates, and to about 4 percent more cotton production, because of an increase in the normal yield of cotton.

	Agri- cul- tural Con- serva- tion 1941	Par- ity, 1941	Total Pay- ments, 1941
Cotton, cents per lb.....	1.37	1.38	2.75
Wheat, cents per bu.....	8.0	10.0	18.0
Corn, cents per bu.....	9.0	5.0	14.0
Rice, cents per cwt.....	5.5	20.0	25.5
Flue-cured tobacco, cents per lb.....	0.8	0.6	1.4
Fire-cured tobacco, cents per lb.....	1.5	0.2	1.7
Cigar filler and binder, cents per. lb.....	0.8	0.7	1.5

COWS, HEIFERS, AND CALVES BEING KEPT FOR MILK
 COWS, UNITED STATES, JAN. 1, 1920-41



During the past 2 years—1939 and 1940—the price of milk cows has averaged higher in relation to the general level of prices of farm products than in any other 2-year period since 1910. Beef cattle also have been relatively high in price. With these relatively high prices, farmers have been saving a large number of heifer calves, holding back breeding stock, and expanding their herds. Increases in numbers of milk cows have followed, and the number of young dairy stock on farms is relatively large. A further increase in numbers of cows is in prospect.

Economic Trends Affecting Agriculture

Year and month	Indus- trial pro- duction (1935- 39=100) ¹	Income of indus- trial workers (1924- 29=100) ²	Cost of living (1924- 29=100) ³	(1910-14=100)			Farm wages	Taxes ⁵	
				Whole- sale prices of all commod- ities ⁴	Prices paid by farmers for commodities used in \$—				
					Living	Pro- duc- tion			Living and produc- tion
1925.....	91	98	101	151	164	147	157	176	270
1926.....	96	102	102	146	162	146	155	179	271
1927.....	95	100	100	139	159	145	153	179	277
1928.....	99	100	99	141	160	148	155	179	279
1929.....	110	107	99	139	158	147	153	180	281
1930.....	91	88	96	126	148	140	145	167	277
1931.....	75	67	88	107	126	122	124	130	253
1932.....	58	46	79	95	108	107	107	96	219
1933.....	69	48	75	96	109	108	109	85	187
1934.....	75	61	77	109	122	125	123	95	178
1935.....	87	69	79	117	124	126	125	103	180
1936.....	103	80	80	118	122	126	124	111	182
1937.....	113	94	83	126	128	135	130	126	187
1938.....	88	73	81	115	122	124	122	125	186
1939.....	108	84	80	113	120	122	121	123	190
1940.....	122	95	81	115	121	124	123	126	-----
1940—April.....	111	88	81	115	-----	-----	123	124	-----
May.....	115	88	81	114	-----	-----	123	-----	-----
June.....	121	90	81	113	121	125	123	-----	-----
July.....	121	93	81	113	-----	-----	122	129	-----
August.....	121	96	81	113	-----	-----	122	-----	-----
September.....	125	99	81	114	121	123	122	-----	-----
October.....	129	101	81	115	-----	-----	122	129	-----
November.....	132	104	81	116	-----	-----	122	-----	-----
December.....	138	108	81	117	122	125	123	-----	-----
1941—January.....	139	110	81	118	-----	-----	123	124	-----
February.....	141	111	81	118	-----	-----	123	-----	-----
March.....	143	112	82	119	-----	-----	123	-----	-----
April ⁷	-----	-----	-----	121	-----	-----	-----	138	-----

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	140	153	163	156	99
1926.....	131	122	138	143	147	152	159	145	94
1927.....	128	128	144	121	140	155	144	139	91
1928.....	130	152	176	159	151	158	153	149	96
1929.....	120	144	141	149	156	157	162	146	95
1930.....	100	102	162	140	133	137	129	126	87
1931.....	63	63	98	117	92	108	100	87	70
1932.....	44	47	82	102	63	83	82	65	61
1933.....	62	64	74	105	60	82	75	70	64
1934.....	93	99	100	103	68	95	89	90	73
1935.....	103	101	91	125	118	108	117	108	86
1936.....	108	100	100	111	121	119	115	114	92
1937.....	126	95	122	123	132	124	111	121	93
1938.....	74	70	73	101	114	106	108	95	78
1939.....	72	73	77	105	110	104	94	93	77
1940.....	85	81	79	114	108	113	96	98	80
1940-April.....	96	85	81	128	104	110	82	98	80
May.....	92	83	88	117	108	106	84	98	80
June.....	83	81	104	112	102	104	81	95	77
July.....	78	80	89	98	110	105	88	95	78
August.....	76	77	79	107	110	109	90	96	79
September.....	77	76	73	114	114	111	104	97	80
October.....	80	78	79	99	112	116	112	99	81
November.....	83	79	71	98	112	121	120	99	81
December.....	81	79	75	93	111	128	122	101	82
1941-January.....	84	80	78	117	130	121	100	104	7 85
February.....	81	80	80	156	130	118	90	103	7 84
March.....	84	82	83	134	129	118	90	103	84
April.....	90	88	89	161	137	121	104	110	7 89

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.